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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/540,191

06/20/2005

Sonja Salmon

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EXAMINER

KHAN, AMINA S

ART UNIT

PAPER NUMBER

1796

NOTIFICATION DATE

DELIVERY MODE

08/21/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Patents-US-NY@novozymes.com

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/540,191 | Applicant(s) SALMON ET AL. | |
| | Examiner AMINA KHAN | Art Unit 1796 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 62-72 and 85-89 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 62-72 and 85-89 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 8, 2009 has been entered.

2. Claims 62-72 and 85-89 are pending. Claims 1-61 and 73-84 have been cancelled. Claims 85-89 are new. Claim 62 has been amended.

3. The rejection of claims 62-67,70-78,83 and 84 under 35 U.S.C. 103(a) as being unpatentable over Baeck et al. (US 6,077,818) in view of Sando et al. (US 3,481,684) is withdrawn in view of applicant's amendments to the claims.

4. Claims 68 and 69 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Baeck et al. (US 6,077,818) in view of Sando et al. (US 3,481,684) and further in view of Schneider et al. (US 6,165,761) for the reasons set forth in the previous office action.

5. The rejection of claim 79 under 35 U.S.C. 103(a) as being unpatentable over Baeck et al. (US 6,077,818) in view of Sando et al. (US 3,481,684) and further in view of Sugio et al. (CA2444735) is withdrawn in view of applicant's cancellation of the claim.

6. The rejection of claims 80-82 under 35 U.S.C. 103(a) as being unpatentable over Baeck et al. (US 6,077,818) in view of Sando et al. (US 3,481,684) and further in view of Hage et al. (US 2003/0166485) is withdrawn in view of applicant's cancellation of the claims.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 62-72 and 85-89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baeck et al. (US 6,077,818) in view of Sando et al. (US 3,481,684) and further in view of Schneider et al. (US 6,165,761).

Baeck et al. teach laundry detergent composition comprising oxidases and a glucose substrate which may be utilized for hydrogen peroxide production by means of glucose oxidase (column 8, lines 55-65) and water (see examples). Baeck et al. teach that any reducing saccharide containing 5 or 6 carbon atoms can be used, e.g.,

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glucose, galactose and galactosyl moieties can be substituted for the glucosyl moieties (column 11, lines 1-15). Baeck et al. teach treating cottons and other cellulotics (abstract; column 25, lines 20-65). Baeck et al. teach the pH of the treatment solution is preferably from 7 to 11, especially from 7.5 to 10.5, preferably between 9 to 10.5 (column 24, lines 2-4).

Baeck et al. do not specifically teach the concentration or origin of the carbohydrate oxidase, the concentration of the substrate and methods of desizing, scouring or post bleaching alkaline treatment.

Sando et al. teach it is conventional to desize scour, bleach and then alkaline treat cotton and cellulosic fabrics, wherein the alkaline treatment is carried out with hydrogen peroxide at pH about 9-11 and temperature of 85-90°C (column 3, lines 15-65).

Schneider et al. teach a novel carbohydrate oxidase having the capability to oxidize maltodextrins and cellodextrins more efficiently than glucose may be obtained from a strain of *Microdochium*, particularly *M. nivale* or a fungal source (column 4, lines 15-25 and 45-55; column 5, lines 5-10, column 12, lines 55-65). Schneider et al. further teach substrates such as maltooligosaccharides having a degree of polymerization of 2-6 specifically, maltose, maltotriose or maltotetraose (column 3, lines 50-65). Schneider et al. further teach the use of these oxidases and substrates as components of laundry detergents to produce hydrogen peroxide (column 20, lines 25-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the methods of Baeck et al. by incorporating the desizing,

pre-scouring and post bleaching alkaline method steps because Sando et al. teach the importance of these steps in refining and bleaching cellulosic textiles.

It would have been further obvious to one of ordinary skill in the art to derive the claimed carbohydrate oxidase from a strain of *Microdochium nivale* or fungal sources, since Schneider et al. teach carbohydrate oxidase derived from *Microdochium nivale* and fungal sources are commonly known and of benefit in producing hydrogen peroxides in detergents. Regarding the concentrations of the carbohydrate oxidase and substrate, since the combination of these components is responsible for the concentration of hydrogen peroxide produced and in turn the hydrogen peroxide concentration is responsible for the level of bleaching of the fabric, it would have been obvious that optimization of the oxidase and substrate amounts would allow production of the desired bleaching effect.

Response to Arguments

9. Applicant's arguments filed regarding Baeck in view of Sando and Schneider have been fully considered but they are not persuasive. The applicant argues that Schneider et al. do not teach a method for manufacturing a textile and are rather directed only towards baking. The examiner respectfully disagrees. Schneider et al. clearly teach the use of the instantly claimed carbohydrate oxidases and substrates as components of laundry detergents to produce hydrogen peroxide (column 20, lines 25-40). Accordingly, the rejections are maintained.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMINA KHAN whose telephone number is (571)272-5573. The examiner can normally be reached on Monday through Friday, 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lorna M Douyon/
Primary Examiner, Art Unit 1796

/Amina Khan/
Examiner, Art Unit 1796
August 13, 2009